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**Fig. 2**

Amino Acid Sequences of Intracellular Targeting Signals

	<u>HA Tag</u>	<u>Targeting Signal</u>
Cytoplasmic Targeting	(SEQ ID NO: 28)	YPYDVDPDYA-
Nuclear Targeting:	(SEQ ID NO: 29)	YPYDVDPDYA-TPPLLVLV*
Lysosomal Targeting	(SEQ ID NO: 30)	YPYDVDPDYA-SDKQTLLQNEQLYQPL*
Plasma Membrane	(SEQ ID NO: 31)	YPYDVDPDYA-SKDGKKKKKSKTKCVIM*
E.R. Retention/Recycling	(SEQ ID NO: 32)	YPYDVDPDYA-SEKDEL*
Peroxisomal Targeting	(SEQ ID NO: 33)	YPYDVDPDYA-SKL*
Proteosomal Targeting	(SEQ ID NO: 34)	YPYDVDPDYA-HIKVRRKNIFDAYQEIMRQTPEDLKKRL
	(SEQ ID NO: 35)	MIKFDGEEGLDYGGVSREFFLLSHEMFNPFYCLFEYSAYD
	(SEQ ID NO: 36)	NYTIQINPNSGINPEHLNYFKFIGRVVGLGVFHRRLDAF
	(SEQ ID NO: 37)	FVGALYKMMMLRKKVVLQDMEGVDAEVYNSLN
	(SEQ ID NO: 38)	WMLENSIDGVLDLTFSADDERFGEVVTVDLKPDDGRNIEVTDGN
	(SEQ ID NO: 39)	KKEYVELYTQWRIVDRVQEQAFAFMDGFNLIPELVTVFDER
	(SEQ ID NO: 40)	ELELLIGGIAEIDIEDWKKHTDYRGYQESDEVIQWFVKCVSEW
	(SEQ ID NO: 41)	DNEQRARLLQFTTGTSRIPVNGFKDLQGSDDPRRFTIEKAGEVQ
	(SEQ ID NO: 42)	QLPKSHTCFNRVDLPQYVDYDSMKQKLTLAVEETIGFGQE

Fig. 3A

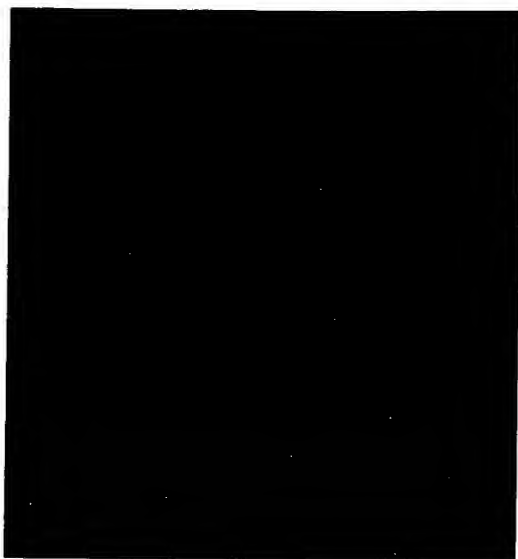


Fig. 3B



pHD-25Q  
Fig. 3C



pHD-47Q  
Fig. 3D



pHD-72Q

pHD-104Q

007220 55602560

**Fig. 4A**



pHD-104Q-GFP

**Fig. 4B**



pHD-72Q-GFP

007220-5502300

COS-7 cells co-transfected with sFv-NLS  
and GFP-HD-Q25

N-HD-C4 sFv

Negative Control sFv

Fig. 5A

Fig. 5B

Phase

Fig. 5C

Fig. 5D

Rhodamine

Fig. 5E

Fig. 5F

GFP

Fig. 5G

Fig. 5H

Rhodamine  
+  
GFP

007220" 55002920

COS-7 cells co-transfected with sFv-NLS  
and GFP-DRPLA-Q35

N-HD-C4 sFv

Negative Control sFv

Fig. 6A

Phase

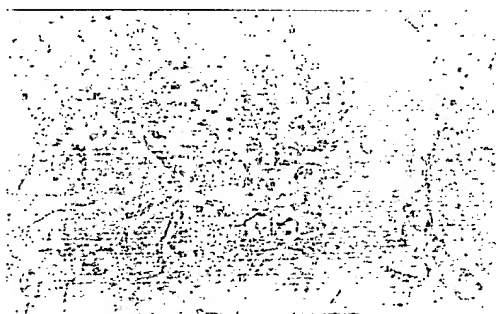


Fig. 6B

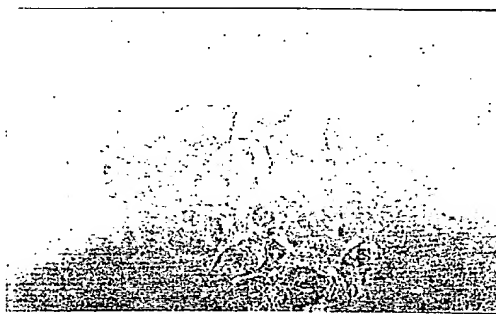


Fig. 6C

Rhodamine



Fig. 6D

GFP



Fig. 6E



Fig. 6F

Rhodamine  
+  
GFP



Fig. 6G



007220-55602560

# COS-7 cells co-transfected with sFv-NLS and GFP-HD-Q104

N-HD-C4 sFv

Negative Control sFv

Fig. 7A

Fig. 7B

Phase

Fig. 7C

Fig. 7D

Rhodamine

Fig. 7E

Fig. 7F

GFP

Fig. 7G

Fig. 7H

Rhodamine  
+  
GFP

001220 5502360

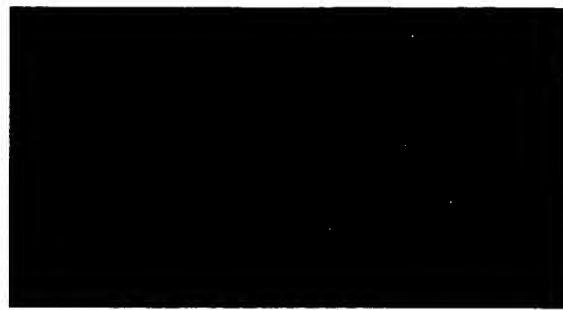


Fig. 8A



pHD-72Q

Fig. 8B



pHD-72Q + C4

Fig. 8C



pHD-72Q + C4-NLS

Fig. 8D



pHD-72Q + C4-LYS

Fig. 8E



pHD-104Q

Fig. 8F



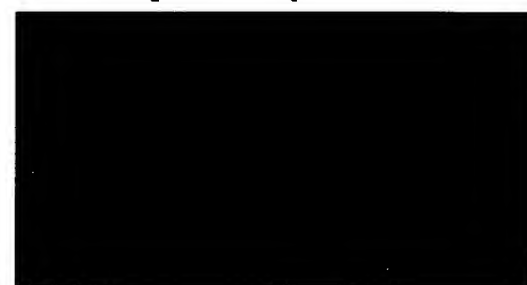
pHD-104Q + C4

Fig. 8G



pHD-104Q + C4-NLS

Fig. 8H

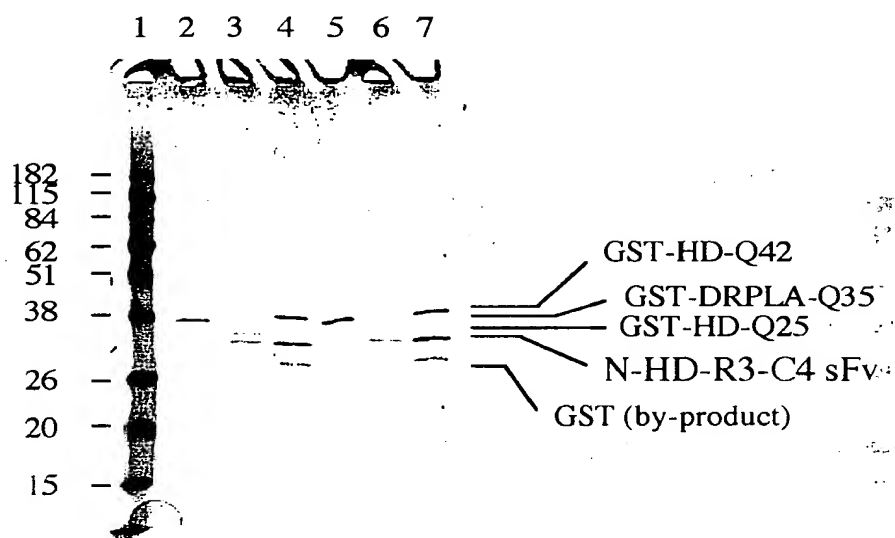


pHD-104Q + C4-LYS

00120-9902560

**Fig. 9**

**Affinity purification of N-HD-R3-C4 sFv  
(anti N-terminal Huntingtin peptide sFv antibody)**



Lane 1: protein marker

Lane 2: N-HD-R3-C4 sFv clone 1 + GST-DRPLA-Q35

Lane 3: N-HD-R3-C4 sFv clone 1 + GST-HD-Q25

Lane 4: N-HD-R3-C4 sFv clone 1 + GST-HD-Q42

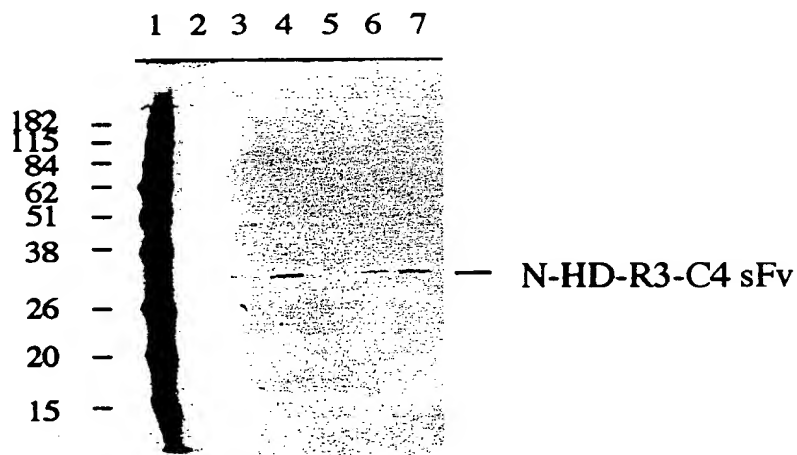
Lane 5: N-HD-R3-C4 sFv clone 2 + GST-DRPLA-Q35

Lane 6: N-HD-R3-C4 sFv clone 2 + GST-HD-Q25

Lane 7: N-HD-R3-C4 sFv clone 2 + GST-HD-Q42

**Fig. 10**

**Affinity purification of N-HD-R3-C4 sFv  
(anti N-terminal Huntingtin peptide sFv antibody)**



Western blot (usig9E10 anti-Myc antibody)

Lane 1: protein marker

Lane 2: N-HD-R3-C4 sFv clone 1 + GST-DRPLA-Q35

Lane 3: N-HD-R3-C4 sFv clone 1 + GST-HD-Q25

Lane 4: N-HD-R3-C4 sFv clone 1 + GST-HD-Q42

Lane 5: N-HD-R3-C4 sFv clone 2 + GST-DRPLA-Q35

Lane 6: N-HD-R3-C4 sFv clone 2 + GST-HD-Q25

Lane 7: N-HD-R3-C4 sFv clone 2 + GST-HD-Q42

Fig. 11 A

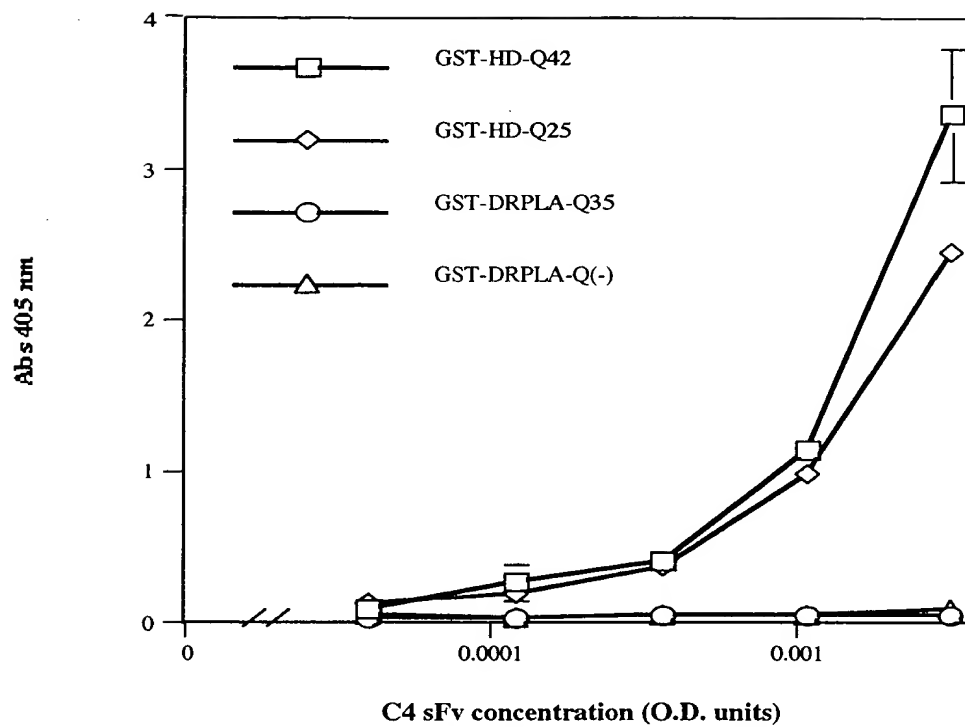


Fig. 11 B

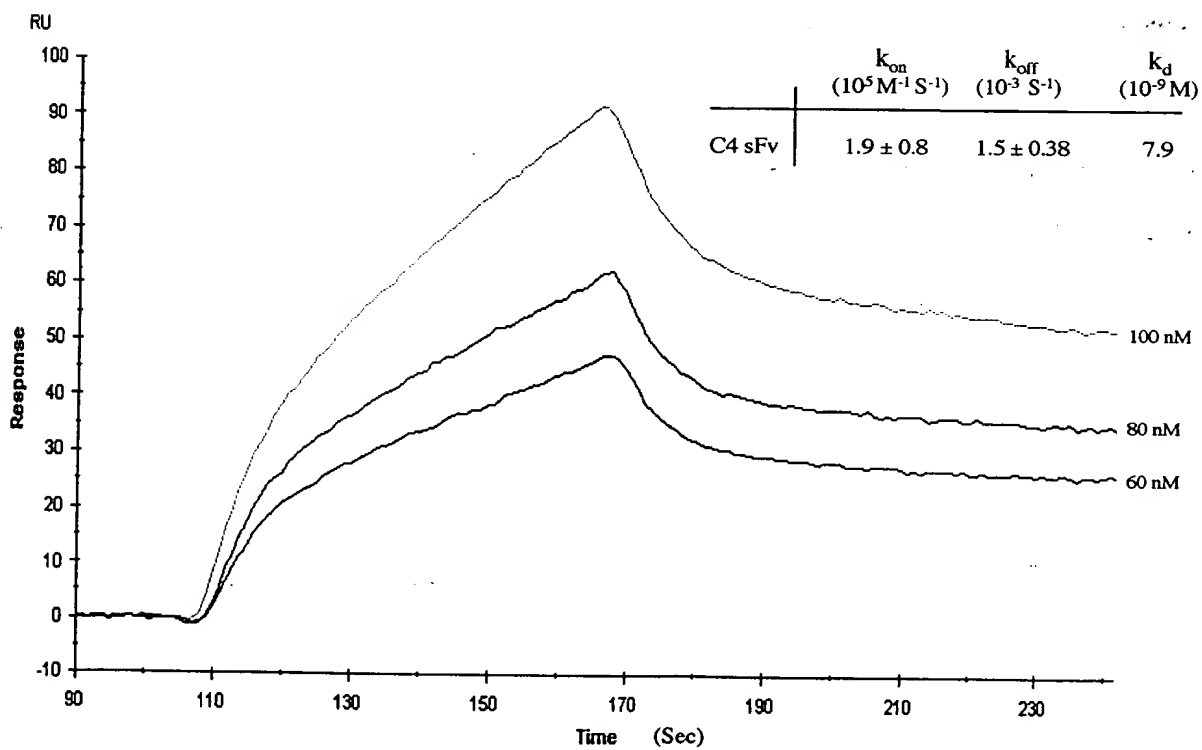
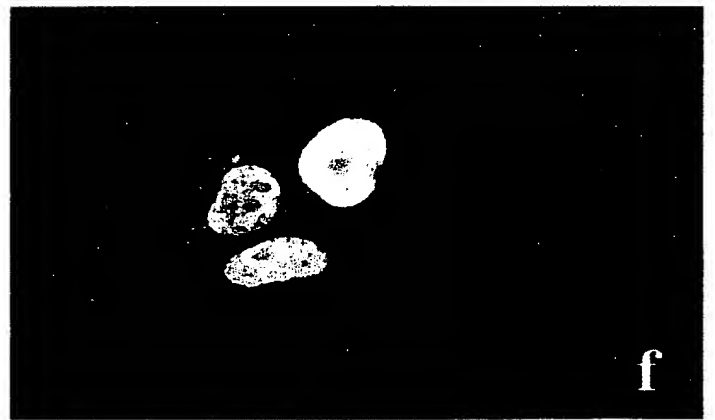
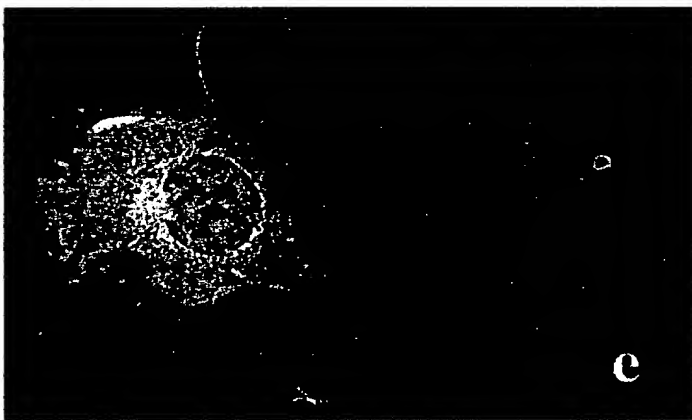
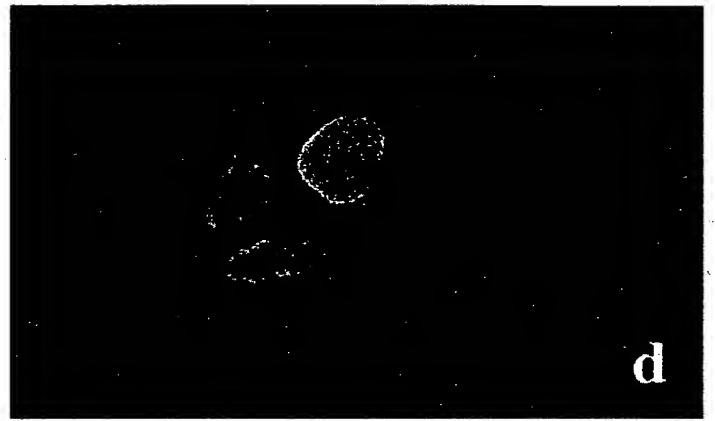
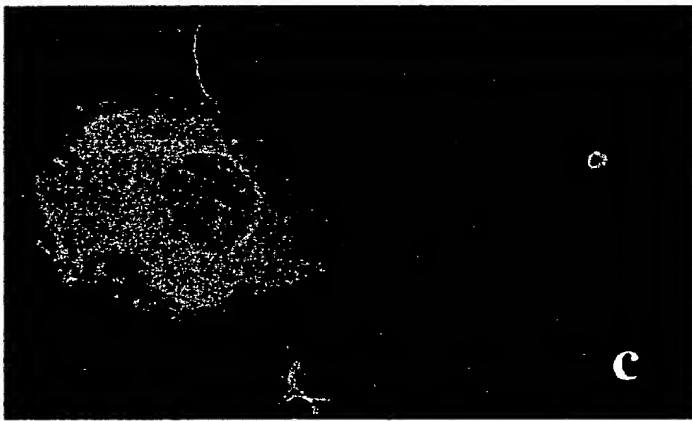
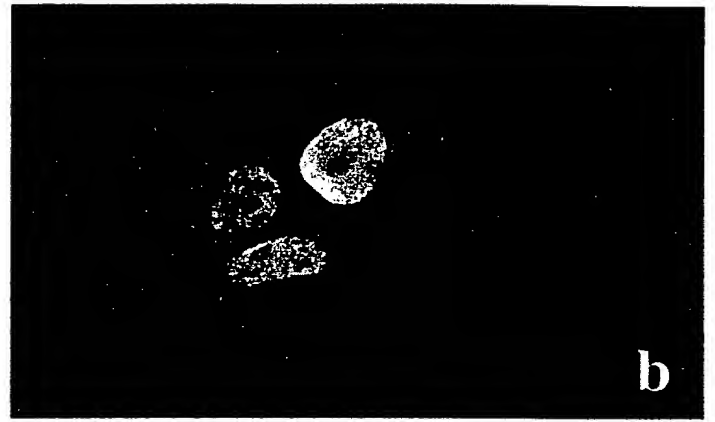
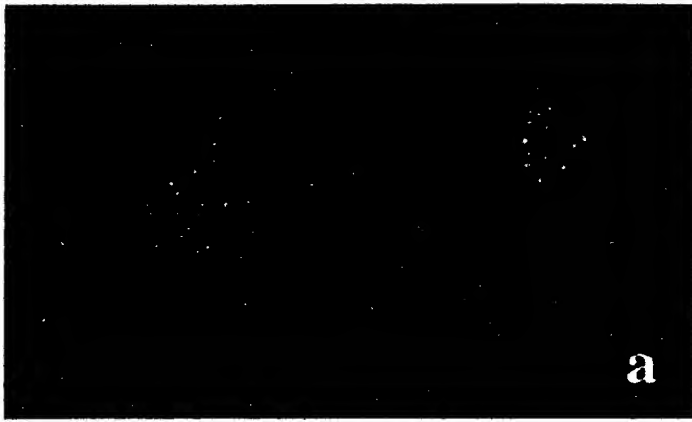
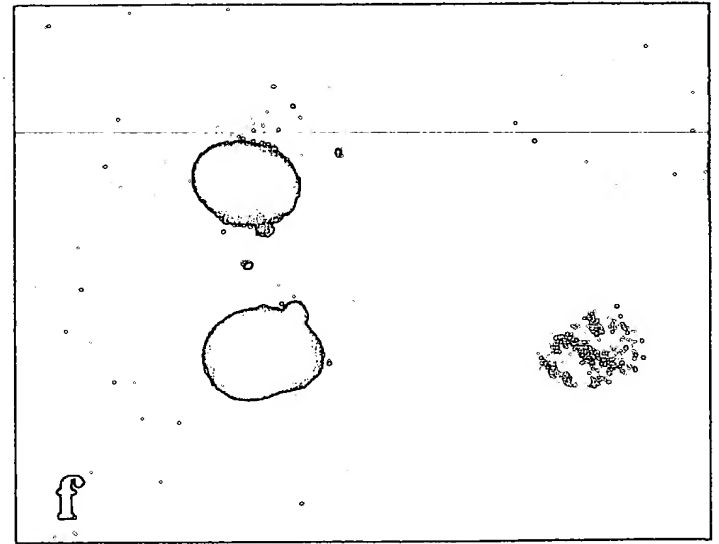
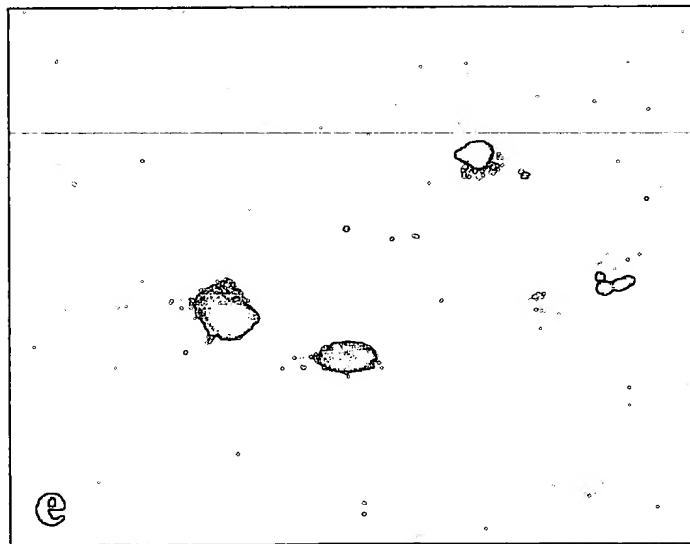
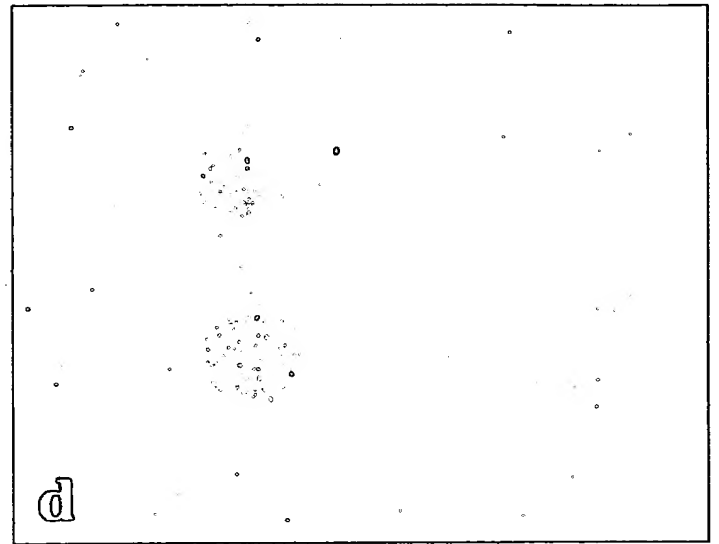
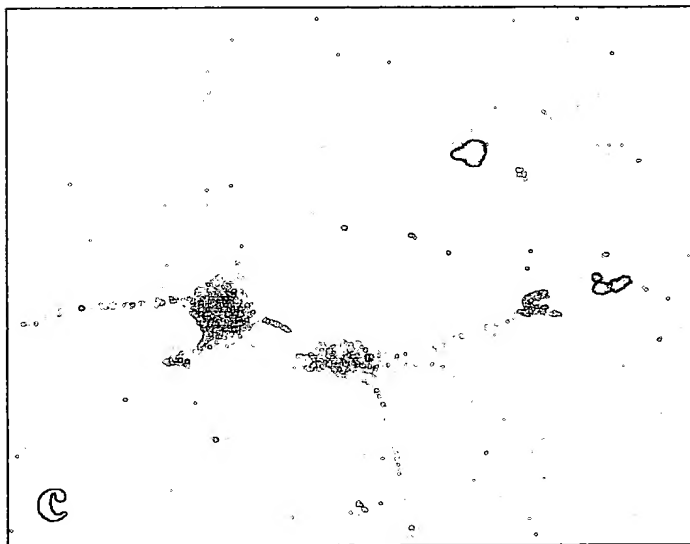
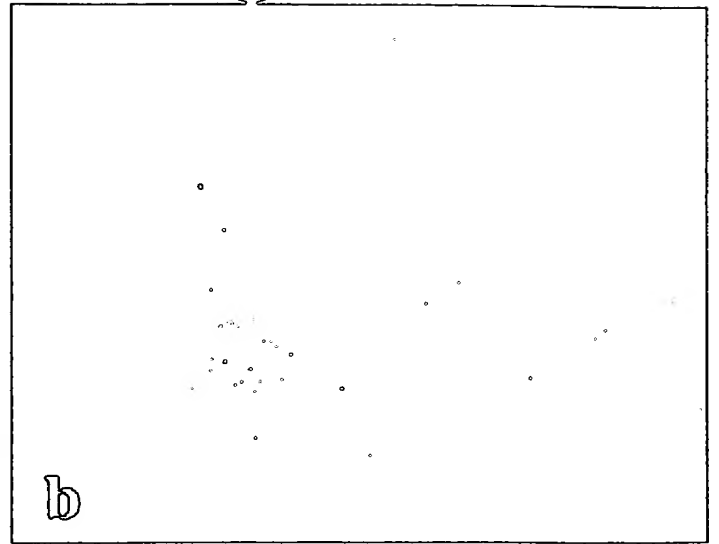
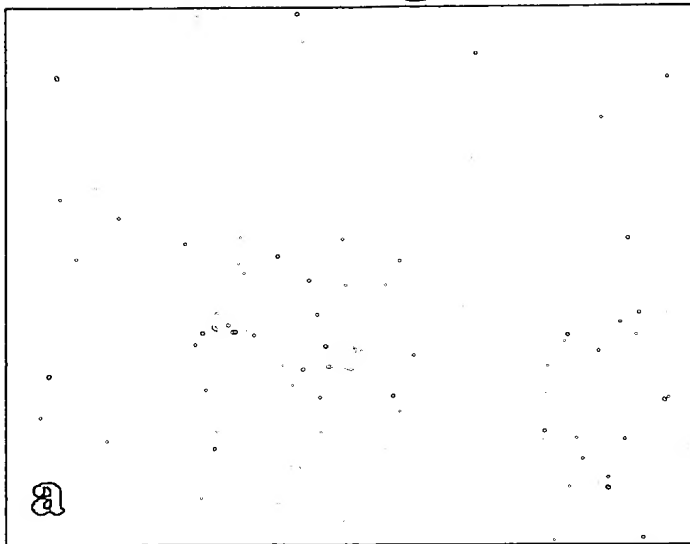


Fig. 12



007E20 99602960

Fig. 13



a

b

c

d

e

f

001220 55002360

Fig. 14

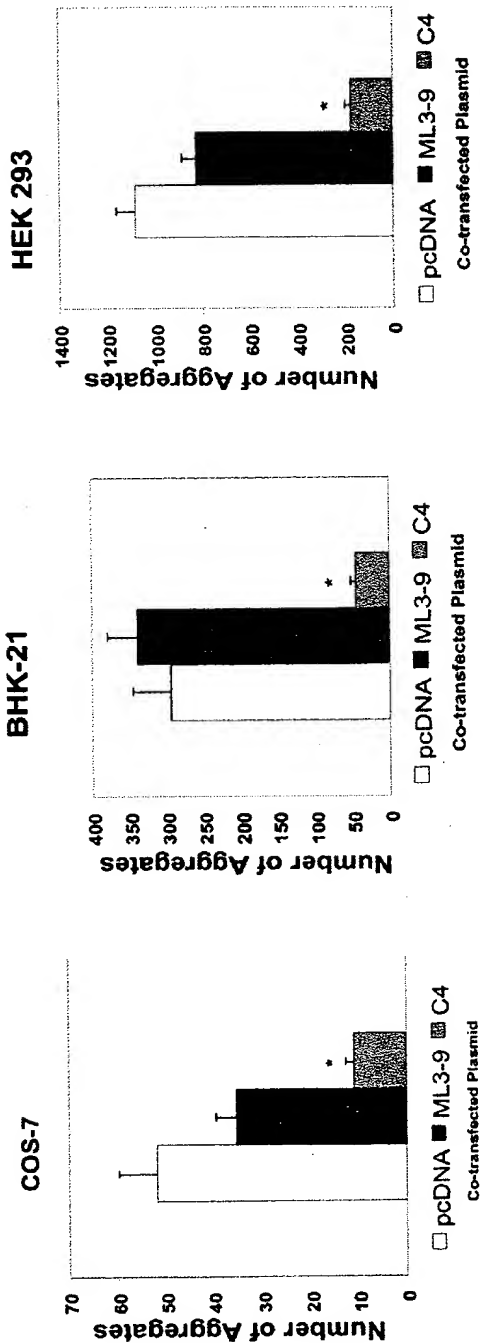
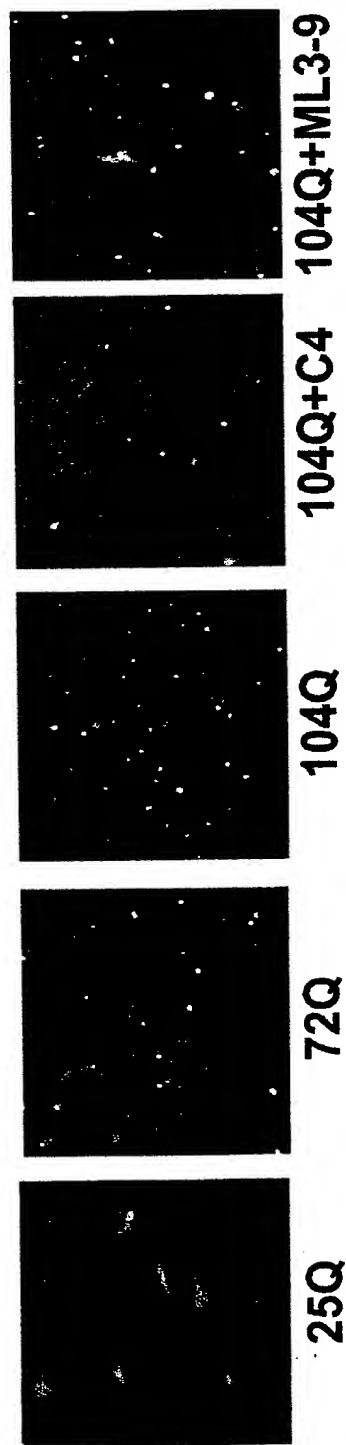


Fig. 15

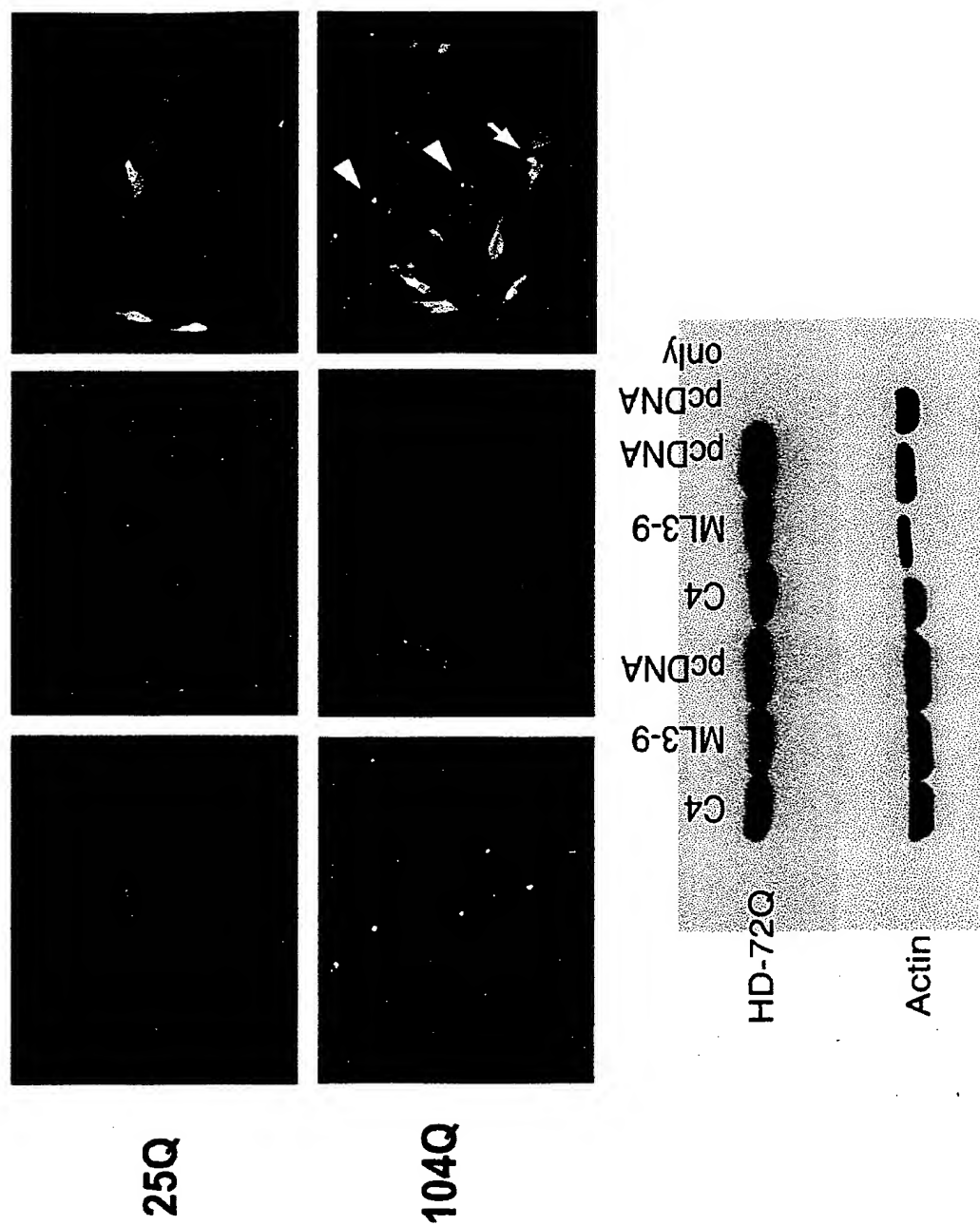
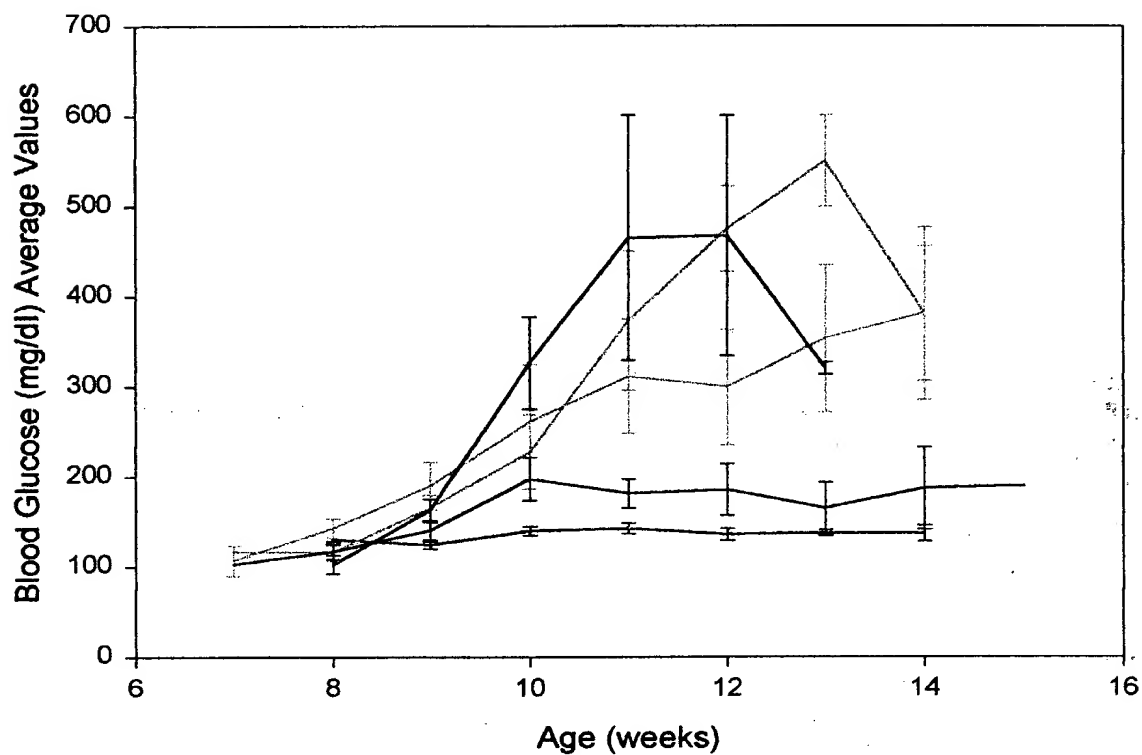




Fig. 16

Blood Glucose Averages with Standard Errors



- Wild Type n=11
- HD/+ pGreen vaccinated n=7
- HD/+ plasmid vaccinated unresponsive n=5
- HD/+ untreated n=3
- HD/+ plasmid vaccinated responsive n=9